JUSTIS Information System for the District of Columbia

Phase 3 Project file

JUSTIS Core Data Transfer Design

Document History	
Document Filename:	CDT_Design_Document_v2
Document Type:	JUSTIS Phase 3 Design Document
Document Status:	Prepared for ITLO Review
Time of Last Update:	6/6/2002 9:48 AM
Project Name:	DC JUSTIS Phase 3
Contract Number:	DC-C-920-S-065
Document Purpose:	This document details the detailed design of the JUSTIS Core Data Transfer Functionality
Revision History	6/2/2002 – Draft for JAD Chairperson and ITLO review

KPMG Consulting

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1. Introduction

1.1 Purpose of This Document

This document is one of a series of documents that describes the District of Columbia Justice Information System (JUSTIS). In particular, this document describes the Core Data Transfer system being implemented in Phase 3 of JUSTIS. Core Data Transfer is one of three initiatives that comprise Phase 3 of JUSTIS. The other two are the Data Quality Alliance and Public Access.

This document highlights the need for Core Data Transfer, provides details of the development of Core Data Transfer design, and describes the conceptual design of the Core Data Transfer solution as agreed upon by the Core Data Transfer Joint Application Design (JAD) participants. The design of Core Data Transfer has been developed to meet the needs of the District of Columbia as stated in the JUSTIS Blueprint.

1.2 Audience

The intended audience for this document includes JUSTIS management and systems support personnel. The nature of the information is somewhat technical, but also includes general descriptions of the system's design. Therefore, a technical background is not necessary to understand the content, but it is helpful.

1.3 Document Maintenance and Security

This document is a design document and does not address specifics of the technical architecture. It is written to provide the Information Technology Advisory Committee (ITAC) a description of the conceptual design of the JUSTIS Core Data Transfer solution. Upon acceptance by the ITAC, the solution will be developed and a more defined and specific document will be developed that will replace this document.

Although this document will be replaced by a more technical document, upon acceptance of the ITAC, this document will be maintained in its accepted format for the project record.

2. Core Data Transfer Background

The objective of Core Data Transfer is to improve the operating efficiency of the participating agencies by providing access to near real time data that is used to initiate or facilitate the agencies' individual internal processes. Nearly every public safety agency in the District of Columbia has a protocol for the processing of an offender upon his/her reception by the agency. Whether called booking, admitting, reception or some other related term, each protocol has something in common – data collection. Further, quite often the data collected by each agency for each offender is identical to the data collected both by the agency processing the offender prior to this reception, and later by the agency processing the offender following this agency's offender processing. Too often identical data, collected by different agencies, differs considerably. While the reasons for these errors are numerous, there can be an improvement – data transfer.

The "best" data, that is the more accurate and complete data, is always found within the records of the "originating agency". The originating agency is the agency responsible for, and with the means and tools to initially collect, certain data. That data is often collected to satisfy a primary mission of the originating agency. An example of such an agency and such data is the collection of identification data by a law enforcement agency or a pretrial services agency. These agencies traditionally identify and classify offenders for a variety of mission related responsibilities and have the tools, methods and protocols to do those tasks accurately. These agencies are generally the first agencies to process an offender in a justice cycle. In addition, to participate in national programs and systems, these agencies commonly use universally accepted standards for both data and code tables. JUSTIS recognizes this as an opportunity for the entire justice community.

With the initiation of the third phase JUSTIS it was agreed that up to 15 data elements from among the identification, booking and pretrial services processes be made available to all other JUSTIS participants. The precise data set was to be developed through the implementation of Joint Application and Design (JAD) sessions, which required the participation of the JUSTIS Implementation Team and an ad hoc ITAC Working Group established specifically for the purpose of designing a solution that meets the requirements of the JUSTIS community. These data, to the extent feasible, follow the national standards for data elements and codes tables. These data would be made immediately available to agencies via "push" technology. For those agencies that do not process all offenders or for those agencies that do not have an immediate demand for the data, "pull" technology would allow them to call for the data when needed.

Currently, these data are acquired using a variety of means specific to each agency and dependent upon the technological ability of the agency. The JUSTIS agencies depend heavily on the timely receipt of specific data in order to initiate or facilitate their data processes. However, the current data gathering methods are cumbersome and often inhibit the agencies from completing their data processing procedures in a timely manner. The JUSTIS Core Data Transfer solution is designed to gather, organize, and distribute the agreed upon core data to JUSTIS agencies in a timely manner.

The following sections describe the development process that took place through the JAD sessions and describes the conceptual design of the solution.

3. Core Data Transfer Joint Application Design (JAD) Sessions Summary

The Core Data Transfer JAD sessions served as a forum for the open discussion and collaboration between participating JUSTIS agencies and the JUSTIS Implementation Team. Five weekly JAD sessions were held to determine the Core Data Transfer design and specifications. End users as well as systems administrators were on hand to offer their opinions and insights, which formed the basis for the conceptual design of the Core Data Transfer solution.

The following is a collection of the notes from each JAD session. The notes include all discussion and findings for each session. A complete list of all JAD Session attendees is shown in the Appendix, 5.1 JAD Session Attendees.

3.1 JAD Session #1

This meeting was the first of 5 scheduled Joint Application Design (JAD) sessions to discuss and develop the requirements for the JUSTIS Core Data Transfer functionality. The JUSTIS Implementation Team coordinated the JAD discussions and provided relevant materials.

Earl Gillespie, the ITLO, and the JUSTIS Implementation Team provided the JAD sessions members with background information on JUSTIS, the current functionality and the proposed future functionality. During his briefing he introduced two individuals whose involvement is extremely vital to the success of JUSTIS, Janice Bergin who served as the Core Data Transfer Committee Chairperson and Dave Kennamer the recently hired JUSTIS Information Technology Security Officer.

Dave Kennamer provided JAD members with an overview of his background and information on his past work experiences in information systems at IBM. Mr. Kennamer expressed his strong interest in Phase 3 of JUSTIS and requested advice from committee members on how he can assist getting other agencies to participate in the JAD sessions. Janice Bergin gave a brief introductory statement regarding her role and the vested interest her agency has in the success of the Core Data Transfer development. She noted that she is looking forward to working with the various participating agencies.

The JUSTIS Implementation Team Manager, Tony Curington gave a brief overview of the Management Definition Guide. This was followed by a brief demonstration of JUSTIS and the JUSTIS Inquiry Application.

The JUSTIS Implementation Technical Lead, Vidyababu Kuppusamy, followed Mr. Curington. Mr. Kuppusamy reviewed the conceptual Core Data Transfer functionality as it was detailed in the accepted KPMG Consulting Proposal. This presentation was followed by a brief review of the assumptions involved in the design of the conceptual model.

The importance of the deployment of District-wide tracking number was highlighted in the review of the Management Definition Guide. The Criminal Justice Coordinating Council (CJCC) Tracking Number Report was distributed in the committee member JAD Session binders. This document outlines the need for a tracking number report common to all CJCC agencies. The deployment of a tracking number is critical to the indexing of information in JUSTIS Core Data Transfer.

Janice Bergin (Chairperson), the ITLO, and Ron Hickey of Pretrial Services Agency (PSA) discussed the issues surrounding the use of a tracking number. The ITLO acknowledged that the arrest number is the closest thing to a tracking number and he explained the benefits of using it as a basis for the development of a tracking number. The ITLO reiterated that the deployment of a tracking number and its integration into JUSTIS would provide users the ability to track offenders as they progress through the criminal justice system and all would be able to be associated with the individual arrest.

The JUSTIS Team Manager explained the conceptual interpretation of the current data transfer process and some of the issues involved with it. The issues involved with the current data transfer process are the continued use of manual steps and the time lags between updates.

Dennis Caravantes of PSA began the JAD session open discussion by clarifying the current data transfer process. Mr. Caravantes and Mr. Hickey attempted to describe some of the actual processes that are occurring in the PSA data transfer process. At this point, the discussion focused on the current data transfers processes at PSA. This includes data transfers from the Metropolitan Police Department Criminal Justice Information System (CJIS) to PSA's Automated Bail Agency Database (ABADABA), and from the Superior Court Criminal Information System (CIS) to ABADABA and eventually to the Pretrial Real Time Information System Manager (PRISM). Figure 1 illustrates the current core data transfer processes in place at PSA.

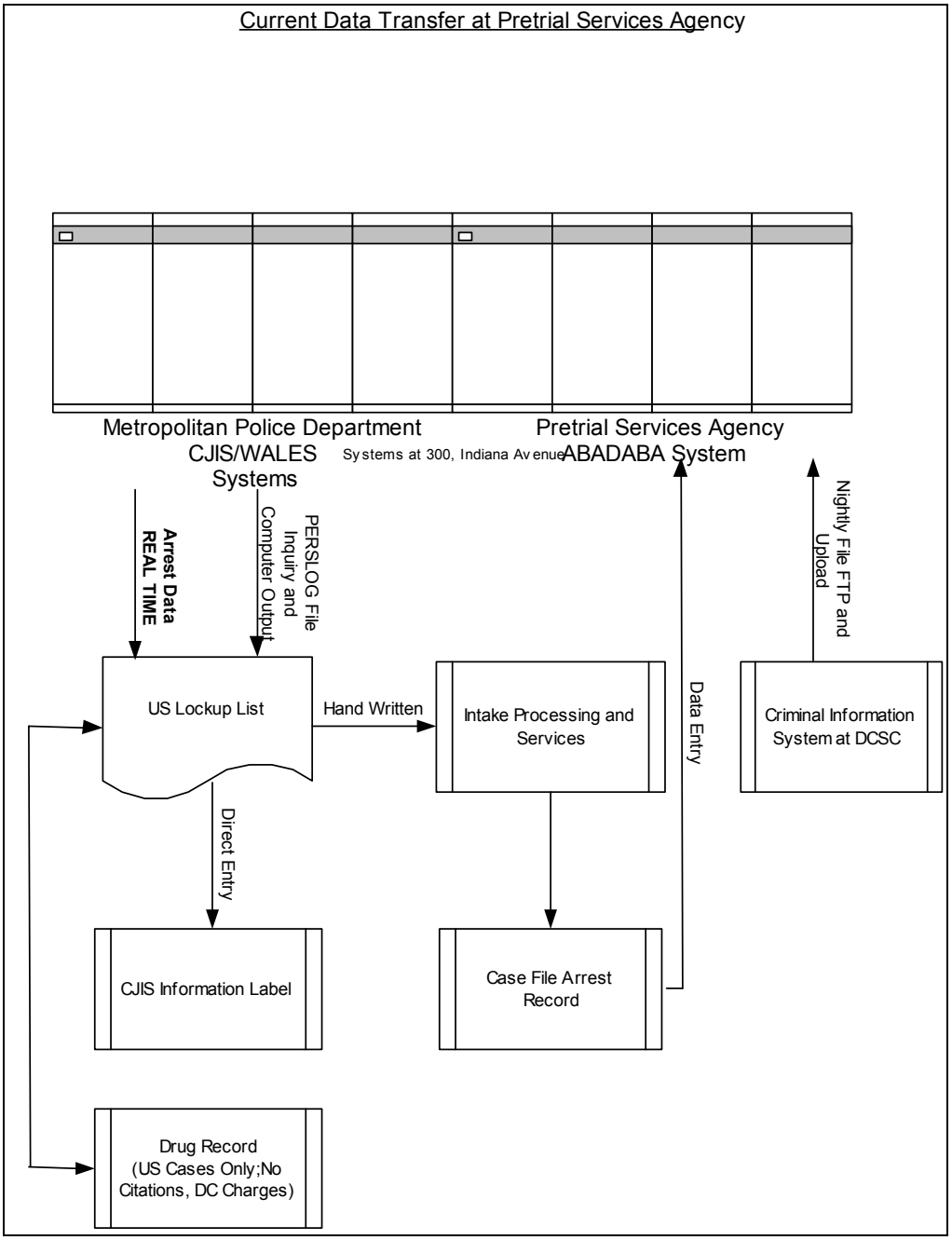

Figure 1 - Current PSA Data Transfer Processes

It was determined that the majority of the desired core data resides in the various forms of the PERSLOG file, generated from the Metropolitan Police Department (MPD) Criminal Justice Information System (CJIS). From this PERSLOG file four “lock-up” lists are generated. These lists, dependent upon the variations, are distributed to various agencies. Within these lists there is a set of common data. The identification of this common data will generate an initial list of candidate data elements for Core Data Transfer functionality. A listing of the four versions of the “lock-up” list is below. Note,

the “lock-up” lists presented below are by receiving agency, but other agencies also print and use the list.

1. US District Court “Lock-up” List
2. Superior Court “Lock-up” List
3. Office of Corporation Counsel Traffic “Lock-up” List
4. Office of Corporation Counsel DC Charges “Lock-up” List

The issue of whether agencies are changing data once received from MPD was identified. The committee members eventually reached a consensus that the data was not changed. However in most cases upon transferring the data into the agency’s operational system, additional data was added.

At the end of the meeting, PSA committee members stressed that the key to Core Data Transfer is the “**real-time**” capture of the “lock-up” list, held by MPD. It was realized that MPD participation in the JAD sessions was absolutely critical to the success of any enhancement to the current data transfer processes. MPD is currently transitioning several IT systems and, as common in the majority of agencies, has to balance priorities. It was agreed that the Chairperson would personally reach out to MPD in order to provide the agency with a better understanding of the JUSTIS needs and to encourage future participation by the agency in all other JAD sessions.

3.2 JAD Session #2

This meeting was the second of five scheduled Joint Application Design (JAD) sessions to discuss and develop the requirements for the JUSTIS Core Data Transfer functionality. The JUSTIS Implementation Team coordinated the JAD discussions and provided relevant materials. All attendees received the meeting notes from the first JAD session held on April 12, 2002. Attendees also received an agenda for the second JAD session.

Janice Bergin, the Core Data Transfer JAD Chairperson, began by introducing herself. Due to the number of first-time attendees, Ms. Bergin requested that all attendees also introduce themselves. Tony Curington, the JUSTIS Implementation Team Manager, then gave a brief background of JUSTIS Phase 3 and raised the key points from the first JAD session. These included the importance of a tracking number, the possibility of the arrest number as a tracking number, and real time access to MPD data. Mr. Curington then opened the floor for discussion of these topics among the JAD members.

Upon review of the previous meeting’s key issues, Karen Wallace of CSOSA began the discussion by expressing concern about the lack of a district-wide tracking number. She noted that the arrest number is not a viable solution because there are many data elements that are unrelated to the arrest number that would not be tracked by the arrest number. The issue of data quality was also raised. But Mr. Curington stated that that the issue of data quality was being dealt with separately from Core Data Transfer.

The discussion moved to the paper data flow for PSA and how the data is received from MPD. It was determined that the data is downloaded from CJIS data and typed into PSA's ABADABA system. The data is not returned to MPD or altered in any way. Various members of the JAD session further discussed issues surrounding the origination and transfer of data.

Some unique instances of data capture were discussed including one instance raised by Al Posey of MPD. Mr. Posey highlighted the circumstance when a defendant is in the court and is charged with a crime during court proceedings without an established method of documentation. An example of this is when a defendant is charged with a contempt of court in the courtroom. The question arose as to whether there are incidents in the criminal justice system, where defendants are charged without an associated arrest and therefore without an arrest number. This remains an open issue. Agencies need to determine how to assign an arrest number in a case in which an individual is charged without an arrest, e.g., grand jury original indictments, and how to assign multiple arrest numbers when a single arrest with one arrest number results in the arrestee being charged in multiple cases.

Mr. Curington then suggested to the attendees that the JAD session could serve as an opportunity to establish core data elements. Janice Bergin took the opportunity to mention PDID as a critical data element and one that should be included in the core data. Other members, including Kathleen French of CSOSA, agreed that PDID is a good data element to start with, but that there were many other critical elements that should be included. However, Dave Kennamer of the CJCC reminded the JAD members that while identification of core data was important, at this stage of the development process it is necessary to first establish the method for obtaining the core data. The method used should involve the most robust set of core data possible, from which core data could be easily chosen. However, if core data is established previous to the access methodology with a less than complete set of data, it would be very difficult to alter the access methodology to accommodate a revised set of core data.

Chairperson Janice Bergin provided JAD session members with a list of desired Core Data Elements from PSA. It was determined that other agencies should establish their desired list of Core Data Elements for discussion at the next JAD Session.

Mr. Posey asserted that MPD is willing to share with JUSTIS the data that they currently share with other agencies, and more if necessary. Mr. Posey also added that MPD would prefer to share the data on a transaction basis and not through regular, database update or transfer processes. Mr. Posey explained that the CJIS database houses arrest data, and that WALES houses identification data, which includes some data elements from arrest data. However, CJIS also keeps a copy of identification data.

The discussion then focused on the future plans for MPD systems, particularly the developing PRIDE system and the Oracle database. Mr. Posey asserted that the current WALES system is not going to be replaced by PRIDE, but that PRIDE will be taking over many CJIS activities. PRIDE is currently planned to be a Microsoft Windows-based system, and may utilize Dell hardware. However, since CJIS is the current originating system and there is no definite timeline for the implementation of PRIDE, it was asserted by Mr. Kennamer that the focus for Core Data Transfer should be on CJIS. The potential for the MPD Oracle database was also revealed to be less

promising for real time data access since the Oracle database will not receive real time data and will serve only as a reporting tool and for contribution to the JUSTIS inquiry application.

The potential for real time access to MPD data was discussed between the various agency representatives. In particular, Ron Hickey and Janice Bergin of PSA, and Al Posey of MPD discussed the current transfer process of MPD data to PSA. Mr. Hickey confirmed that PSA currently receives a lock-up list from MPD CJIS via manual processes. Mr. Hickey and Ms. Bergin expressed their agency's (PSA) need for real time access to MPD data. Ms. Bergin added that PSA begins to accumulate MPD data before MPD completes their booking process, or as soon as MPD enters a name in CJIS.

Mr. Posey recognized the need for distribution of core data in real time and expressed an understanding of the situation. Mr. Hickey suggested that the process might require ODBC middleware as a mechanism to enable real time access. Mr. Posey also added that the MPD system processes in CICS are ADABASE and are all coded in Natural.

Mr. Curington began to complete the meeting by stating that real time Core Data Transfer is achievable. Mr. Posey agreed that it is technically possible, but that some research would be required. Ms. Bergin also expressed concern over identification data. Identification data is updated often but there are no records of what was changed or for what reason, leaving PSA unsure of the quality of the data. At the end of the meeting, MPD agreed to research these issues and requested a list of desired data, which was agreed to be provided by all agencies at the next meeting. Mr. Posey of MPD also agrees to research what will be required to access arrest data in real time with the help of Amadi Boone, a system administrator at MPD. Also, the following agencies were suggested to be in the most immediate need of Core Data; Office of Corporation Council (OCC), Pretrial Services Agency (PSA), United States Attorney's Office (USAO), and District of Columbia Superior Court (DCSC). CSOSA needed to be informed of arrests immediately, but does not necessarily need arrest data in real time.

3.3 JAD Session #3

This meeting was the third of five scheduled Joint Application Design (JAD) sessions to discuss and develop the requirements for the JUSTIS Core Data Transfer functionality. The JUSTIS Implementation Team coordinated the JAD discussions and provided relevant materials. All attendees received the meeting notes from the second JAD session held on April 26, 2002. Attendees also received an agenda for the third JAD session.

Janice Bergin, the Core Data Transfer JAD Chairperson, began by introducing herself. Due to the presence of some first-time attendees, Ms. Bergin requested that all attendees also introduce themselves. Tony Curington, the JUSTIS Implementation Team Manager then directed the attendees' attention to the agenda. The first item to address was the results of research conducted by MPD to assess the potential for real time access to MPD arrest data. Al Posey of MPD noted that his research in this area

revealed some questions that needed to be addressed. In particular, Mr. Posey asserted that MPD data is subject to change after it is entered into the MPD operational system (CJIS). For example, MPD occasionally might have changes to make such as a mistaken PDID in an arrested individual's file. This change or update may not be available for real-time display via the proposed Core Data Transfer process. If Core Data is altered subsequent to Core Data Transfer distribution, Mr. Posey asked how the changes should be tracked and made available to the JUSTIS agencies. Janice Bergin responded by saying that PSA would be able to get some changes from DC Superior Court (DCSC). It was also noted that changes would be available in the following transaction of Core Data, in which case all agencies would have refreshed and updated data as the changes were made by MPD.

Mr. Posey also posed a more complicated scenario in which an arrest is processed by MPD, the charges are dropped and the record is sealed. In such a case, the arrest file could be processed to the point where Core Data Transfer transactions might not include the altered data. Both Janice Bergin and Ron Hickey of PSA confirmed that this is an important situation requiring a resolution. A comprehensive discussion concerning the extent of processing an arrest before it is dropped ensued among the attendees. Members found that there were two circumstances, which might cause a problem in this area. The first is when MPD modifies an arrest after processing the arrest, and the second is when USAO or OCC drops charges against a defendant or the defendant is found not guilty and the case is sealed. Mr. Posey revealed that MPD's practice for false arrests is to seal the record, while maintaining the arrest number. It was also revealed that DCSC seals files in certain cases and notifies agencies, which are known to have the original data. Agencies notified by DCSC are required to seal information related to the identified cases. Ms. Bergin asserted that because data related to these incidents would be distributed to more agencies in the core data transfer, they too would need notification of sealed matters and act accordingly. It was proposed that the notice of sealed cases could be made via the Core Data Transfer process; and if more agencies are receiving data because of the data transfer process, these additional agencies will have to be notified also. However, Dennis Caravantes of PSA and Kathleen French of CSOSA pointed out that the fundamental purpose of JUSTIS is to share data, not alter it in any way.

Mr. Caravantes noted that there should be rules established for the originating agency to deal with various possible scenarios including the reversal of arrests and removal of charges. Ron Hickey of PSA then summarized processes that should account for any such changes. Mr. Hickey's assertion was simply that MPD and DCSC should publish their data (including arrest and charge reversals which are both sealed files) to JUSTIS Core Data Transfer, which will then distribute this data to participating agencies. Mr. Curington cautioned attendees that Core Data Transfer was not a notification service, which allowed for specific subscription to data, but rather a means for agencies to share a single set of data. He further asserted that any compromise of the proposed Core Data Transfer process would require the approval of the ITLO, Earl Gillespie.

Discussion between the attendees, Information Technology Security Officer Dave Kennamer, Mr. Curington, and Mr. Hickey, ensued concerning the difference between the proposed Core Data Transfer service and notification services. It was agreed that the integrity of Core Data Transfer functionality would remain as long as the data were only provided to the agencies and the participating agencies assumed the

responsibility of regularly completing transactions of core data and closely monitoring their retrieved core data.

Mr. Curington directed the attendees to address the Core Data Transfer architecture. He proposed that one alternative is to have core data housed in a single repository server, which could then be accessed by each agency. Another option would be to push the core data to each agency's JUSTIS server. Mr. Hickey asserted that a single repository server would be the better option because of its simplicity and ease of maintenance. Mr. Caravantes added that it would be useful to have a user interface, possibly a website, where users could easily retrieve core data. However, Mr. Hickey's opinion was that such an interface would add unneeded complexity to the system and could cause data conflicts particularly in the case of arrest reversals (discussed earlier). Mr. Curington addressed this issue by adding that, in such cases, the record could be easily erased from the interface or flagged in some way to alert users of the data revision. Mr. Curington raised his initial issue of Core Data Transfer architecture again, and confirmed with all attendees that a single data repository for core data was the best option. This discussion concluded with all members agreeing on the architecture for Core Data Transfer. This architecture is illustrated in section 4, Solution Design and Methodology.

At this point, MPD addressed some of the data elements requested by PSA and USAO. Mr. Posey asserted that upon a review of the data elements requested by PSA, there were a few that MPD did not collect or have access to. These included citizenship, zip code, phone number, mug shots, and disposition. Mr. Posey also proposed that in order to establish a working process for contribution of MPD data, the initial core data set be comprised of easily accessible data, such as the data included in the MPD CJIS database, which included a large percentage of the requested data items. Thelma James of MPD stated that MPD has only one programmer on staff and that simplifying the initial set of core data would greatly facilitate the process.

However, Ms. Bergin requested other data elements such as information regarding bonds posted, the address of the arrestee, booking date, booking time and the CCN (Complaint Control Number). Mr. Posey said he would research the possibility of those requests, and respond at the next JAD session. Ms. Bergin was particularly interested in the possibility of receiving the address of arrestees.

On the subject of using a common identifier, i.e., the MPD arrest number, Ms. Bergin raised a problem for JUSTIS users, which occurs when a single arrest results in multiple cases. Ms. Bergin explained that users would be unable to efficiently track arrests with multiple charges (resulting in multiple cases) because the single arrest number cannot be applied to multiple cases. Mr. Posey asserted that if multiple charges result from a single arrest, the charges are added as a suffix to the arrest number to identify the different cases. However, this was unable to be verified and attendees expressed doubt if this was actually being done. When a person appears on a lock-up list and is charged with multiple offenses, those offenses may result in one of three scenarios: a single case (which can be tracked through the single arrest number), multiple cases charged by a single prosecutor, e.g., USAO or OCC, or multiple cases charged by both USAO and OCC. In the last two examples, multiple arrest numbers would be needed as identifiers for each case. In any case, users would have no way to know how the multiple charges may be related to an arrest. The resulting problem is that PSA, for example, needs to populate records regarding the

multiple charges, but does not know which case data pertains to which arrest. Upon recognition of this problem, Mr. Posey proposed a framework, which, if practiced by all participating agencies would eliminate the problem by allowing all parties to track arrests with multiple cases.

His proposed idea was to add a single letter suffix to the arrest number, which would indicate the specific charge(s) and case associated with the arrest. For instance, if an arrest yielded five charges, the first charge would be A, the second charge would be B; the third charge would be C, and so on. If multiple charges are to be used in the same case, the suffix will always be the letter of the first charge on the list. For instance, if arrest number 12345 yielded five charges and the charges were:

MPD Charges	Definitions	Docket Number Prefix
A	Driving While Intoxicated	T
B	Destruction of Property	M
C	Disorderly	D
D	Operating after Suspension	T
E	Assaulting a Police Officer	M
F	Sex Assault	F
G	Bench Warrant	

Table 1 - MPD Arrest Example

Due to the nature of the crimes, charges A and D result in a docket number prefixed with a T (for traffic) and are tried as one case. Charge B represents a single misdemeanor case and E represents a second misdemeanor case and both have a docket number beginning with an M (for misdemeanor) and will be tried as single cases, while C, which is represented by a D docket number, would be its own case. It was recommended by a MPD representative that this hypothetical idea be used as a foundation to track documents throughout the system. The process would consist of:

For A and D the arrest number would be 12345A, because A was the first letter in the sequence of those two charges. The case for B would be arrest number 12345B and the case for E would be 12345E for the same reason, and finally the case for C would simply be 12345C because it is the only offense in the case and it is C in the sequence. Upon initial review, none of the attendees agreed that this would be the solution to the problem, but a mere logical and possible avenue to consider when developing a solution for a tracking system. In any instance, all attendees agree that a system needs to be established and that this was a very good starting point.

3.4 JAD Session #4

JUSTIS Implementation Team Manager Tony Curington began the meeting by addressing the issue of core data elements. He reminded the attendees that the baseline core data elements will serve as a starting point for Core Data Transfer and may be built upon in the future. Janice Bergin, Core Data Transfer JAD Chairperson, directed the attention of the attendees to the MPD submitted core data elements and asserted that the list was incomplete. Several essential elements such as PDID, arrest name, true name, date of birth, race, and sex were not shown on MPD's list. Thelma James agreed that data would be included, even though it was left off the list submitted by MPD. Ms. Bergin also stated that in addition to lockup types, which were included on MPD's list, there was a need for citation, stationhouse bond, and post and forfeiture cases to be added to the core data elements list.

Mr. Curington then directed the attention of the attendees to the issue of accessing MPD data in real time. He posed the issue to the attendees in order to prompt input from the various agency representatives. Al Posey of MPD responded first by asking Mr. Curington and the other attendees to first clearly define real time before pursuing the matter. Mr. Curington responded to Mr. Posey by stating that real time meant automated, transaction-based data updates. Mr. Posey further addressed the issue by asking what platform the system would be built on. Mr. Curington stated that the platform would be built to address the needs of the agencies, and that there was no set platform at this point. However, Mr. Curington also asserted that a client-server environment would most likely be the basic platform environment.

Conversation among the attendees then developed surrounding the issue of real time, and how quickly agencies actually needed to get arrest data. Ann Schmidt of the Office of the Corrections Trustee questioned if Core Data Transfer was needed to supply all arrest data on a real time basis. She asserted that it might be more reasonable for the agencies to simply use CJIS as they do today and have Core Data Transfer update recent arrests and releases, without complete arrest data. Ron Hickey of PSA responded by saying that PSA needs all arrest data as soon as possible, preferably as soon as booking occurs, on a transaction basis if possible.

Mr. Posey then revealed a potential obstacle to supplying real time arrest data to the agencies. He asserted that the MPD mainframe would be unable to handle the transfer of data on a real time transaction basis because the load on the mainframe would be too great. Gerald Palombi of the JUSTIS Implementation Team responded by saying that it was important to understand exactly how much added load the transactions would place on MPD's mainframe. Mr. Palombi asserted that if the process is being written on the mainframe once, as it normally would, then there might be the need to re-write to process the transaction. Mr. Posey responded by saying that the actual transaction process would not cause the burdensome load; rather, the back up of the data may overload the mainframe and affect its ability to interact with DC WAN.

JUSTIS Information Technology Security Officer Dave Kennamer responded to this issue by stating that if a direct connection between MPD's mainframe and the JUSTIS MPD server could be made, then the MPD mainframe could supply core data through the JUSTIS MPD server and there would be no problem with the load on the

mainframe. It was confirmed by Mr. Hickey and Mr. Curington that the JUSTIS MPD server and the MPD mainframe were located in the same room and could easily be connected. However, Mr. Palombi, Mr. Posey, and Mr. Kennamer agreed that, in order for the core data to be transferred through the JUSTIS MPD server, there would need to be code written to facilitate the capture of data and populate the core data fields. This would require a thorough understanding of Adabase and Natural (CJIS is coded in Adabase) and the potential for the mainframe's operating system to be manipulated to perform the core data transfer. Dave Kennamer stated that the best way to approach this problem is to hire a contractor who is very familiar with Adabase programming.

Mr. Hickey then proposed abandoning the transaction-based process in favor of a regularly scheduled core data transfer using middleware to facilitate the process. Mr. Hickey asserted that the middleware could capture the core data elements from MPD's mainframe and relay them to the participating agencies. And, even though it wouldn't be real time, the update could occur at very short intervals, which would be adequate for the needs of the agencies.

Upon listening to the two options being discussed, Ms. Bergin requested that the reasons for abandoning the real time transaction be explained. Mr. Hickey stated that the real time transaction-based process would require a great deal of effort on the part of MPD to create the core data and provide it to the agencies. This task would disproportionately stress MPD's resources and may lead to a very time consuming effort. However, if a middleware product is used that can obtain and transfer core data elements from CJIS and make it available to the agencies for retrieval, it will relieve MPD from having to create and send the data. Mr. Kennamer agreed that this was a possibility, but also asserted that it was very important to obtain the services of a specialist in this area (Adabase and Natural programming) to assess the potential of a middleware product. Otherwise, there is no way to truly understand the challenges involved in such a solution.

Mr. Palombi then directed the attention of the attendees to the issue of defining real time. Mr. Kennamer offered the example of a single arrest, which is processed over several hours. How often does the data need to be updated via Core Data Transfer for the agencies to be satisfied? Mr. Hickey asserted that every 10 to 15 minutes would be ideal, but that even every hour would be better than what is available under the current processes.

Mr. Palombi then stated that the difficult task would be to get core data from CJIS (mainframe) to a server platform. Ron Hickey added that if a program can be created to capture a set of core data from CJIS (which Mr. Hickey also admits will require an expert in this type of programming), then the transfer could easily be accomplished via FTP from MPD's mainframe. Dave Edwards, a contractor for MPD asserted that currently, FTP is often used to obtain data from MPD's mainframe with no problems.

Mr. Curington then proposed that a meeting be scheduled to discuss the potential for creating the data set and what obstacles will need to be overcome in this process. It was agreed by the attendees that Amadi Boone and Thelma James of MPD, Mr. Curington, and Ron Hickey should attend the meeting, as well as any other parties that may be able to contribute to the effort.

Mr. Curington then turned the attention of the attendees to data acquisition. In other words, once core data has been made available, how will the agencies move the data into their operational system? Mr. Curington asked the attendees to offer options for how end users will view and retrieve the data. Two examples are a web interface where core data could be downloaded or an automated FTP process where core data is transferred directly to agency servers. Mr. Hickey asserted that for those agencies running SQL Sever, the best solution would be to populate mirrored tables in the agency SQL Server through an FTP process. But not all agencies use SQL Server, so access to the core data would have to be agency specific. Mr. Hickey further asserted that, for those agencies without SQL Server, there would need to be some other process developed, such as a web interface, which would allow them to acquire core data. Mr. Curington then proposed that the JUSTIS Implementation Team create a table that will serve as a poll for each participating agency to describe their current systems and how they will best be able to access core data.

Prior to the close of the meeting, the attendees re-visited the issue of the core data elements. MPD agreed to Ms. Bergin's additional data element requests from the beginning of the meeting and Mr. Curington confirmed that the core data elements are now established. All attendees agreed, and the initial set of core data was accepted. They are shown in section 4.2, Core Data Elements.

3.5 JAD Session #5

JUSTIS Implementation Team Manager Tony Curington began the meeting by addressing the issue of Core Data Transfer security. In particular, the push methodology has the potential to pose a security issue since data is transferred from the JUSTIS agency servers to their operational servers without encryption of the data. Conversely, in pull methodology, users will download data from the Internet, which automatically provides security layers. However, in push methodology, the implementation team is responsible for establishing a secure data connection to the JUSTIS agency server, and does not interfere with agency operational systems.

JUSTIS Information Technology Security Officer, Dave Kennamer added that creating encryption from the JUSTIS agency server to the operational system would be relatively simple should the agencies want to implement the security. However, all attendees agreed that the established core data was not sensitive information, but rather it was public information and there was no risk in transferring it from JUSTIS to their operational systems. Finally, Mr. Curington confirmed with all attendees that there are no security violations resulting from the proposed Core Data Transfer methodology.

Core Data Transfer JAD Chairperson, Janice Bergin raised the issue of the core data elements. In particular, Ms. Bergin questioned why MPD was not offering victim name as a core data element. Thelma James, of MPD, responded that MPD was not allowed to give out this data, as mandated by their legal council. Following on this topic, Mr. Curington directed the attention of the attendees to USAO's data request and began the discussion by noting that USAO's request from MPD was too extensive to serve as a starting point for Core Data Transfer. In addition, Mr. Curington noted that some of the data originated from the DCSC, not MPD. Debbie Grafton, of DCSC

commented that DCSC has a direct connection with MPD, which allows MPD to receive data from DCSC. In particular, MPD receives docket numbers from DCSC, and matches them to MPD arrest records. However, Ms. Grafton stated that MPD had expressed some doubts about the MPD processes that incorporated DCSC data into their operational system.

Ms. Bergin of PSA added that since the docket number may be problematic, it could be removed from the core data elements, if necessary. She noted that docket numbers are created after PSA processes the arrest data, so it would not affect their processing if they were not included in the core data transfer; adding that she couldn't speak for other agencies. However, all parties agreed that the docket number would remain part of the core data transfer data elements. Ms. Grafton then brought up the issue of warrants and asked which data will be included with warrant information. It was agreed by the attendees that warrant number is the same as the docket number for bench warrants and therefore is already accounted for; but the warrant number for an arrest warrant and parole violation does not use the court docket number. Ms. Bergin asked that warrant number and warrant type be added to the core data elements. Ms. James of MPD offered to research if this was possible.

Mr. Curington then confirmed with all attendees that the core data elements have been established with the possibility of two more being added, depending on MPD's ability to do so. They are warrant type and warrant number.

Mr. Curington then turned the attention of the attendees to the issue of data retrieval and the timing of updates. Ms. Bergin and Dennis Caravantes of PSA both agreed that hourly data transfers would be sufficient. Therefore, the meeting concluded with an agreement that at least hourly updates would be the goal for Core Data Transfer.

3.6 Summary of JAD Session Requirements

The Core Data Transfer JAD sessions resulted in the design of functional and easy-to-use data transfer solution that will serve as a baseline for further data transfer opportunities throughout the JUSTIS community. The primary products of the JAD sessions were the system design (see section 4, Solution Design and Methodology), and the agreement on a set of core data elements to be transferred (see section 4.2, Core Data Elements). Note, that as development of Core Data Transfer solution continues, the current solution design is subject to change.

The following bullet points describe the agreed upon requirements that resulted from the Core Data Transfer JAD session:

- **Core Data Elements** – The core data elements as agreed upon by the JAD session participants are contained in the MPD CJIS information system and the whole of the data is a derivative of the arrest report. The data is described in Table 2 - JUSTIS Core Data Elements. The designed JUSTIS data transfer solution will obtain this core data from MPD and make it available to the JUSTIS data transfer community.

- **Data Transfer Methodology** – The JAD session resulted in the requirement of a two-tier architected data transfer methodology, which enables agencies to

directly connect to the JUSTIS Core Data Transfer database. One tier being the data storage facility, in this case the JUSTIS Core Data Transfer MS SQL Server database. The second tier being the agencies information system, such as PSA PRISM or any other agency database receiving the data. An enhancement to this architecture is the insertion of an intermediary or third tier, which introduces simple business logic or query functions that will allow users to easily select specific groups of records for transfer. This intermediary tier is the JUSTIS Inquiry Application.

- **Timeliness of the Data Transfer** – The original request for data transfer was real-time. In order to reduce the workload placed on MPD resources as a result of any data transfer design, the data extraction from CJIS will be batch in nature. Therefore it was determined that the complete data transfer solution was dependent upon the MPD data extraction process and the time it took to complete. MPD estimated that this extraction process could be completed in no more than sixty minutes, with better times resulting from smaller numbers of records and the design of a more efficient data extraction program. As a result, the JAD session participants agreed that the data transfer will run at least every sixty minutes.

- **Core Data Lifecycle** – Two basic design requirements of the entire JUSTIS solution are: 1) the lack of one centralized database that stores all agency data in one place out of the agency's control, and 2) JUSTIS does not replace any current agency information systems. Cognizant of these two requirements and the basic requirement of a data transfer solution to store the data to be transferred, it was agreed that the JUSTIS core data solution will contain a transient database of **no more than fifteen days worth of data**. Data older than fifteen days is deleted from the database. This time frame allows agencies enough time to access the core data yet does not contain enough data to be thought of as an information system that is competitive with CJIS.

4. Solution Design and Methodology

The following diagram illustrates the Core Data Transfer solution design and methodology that resulted from the previous five JAD sessions.

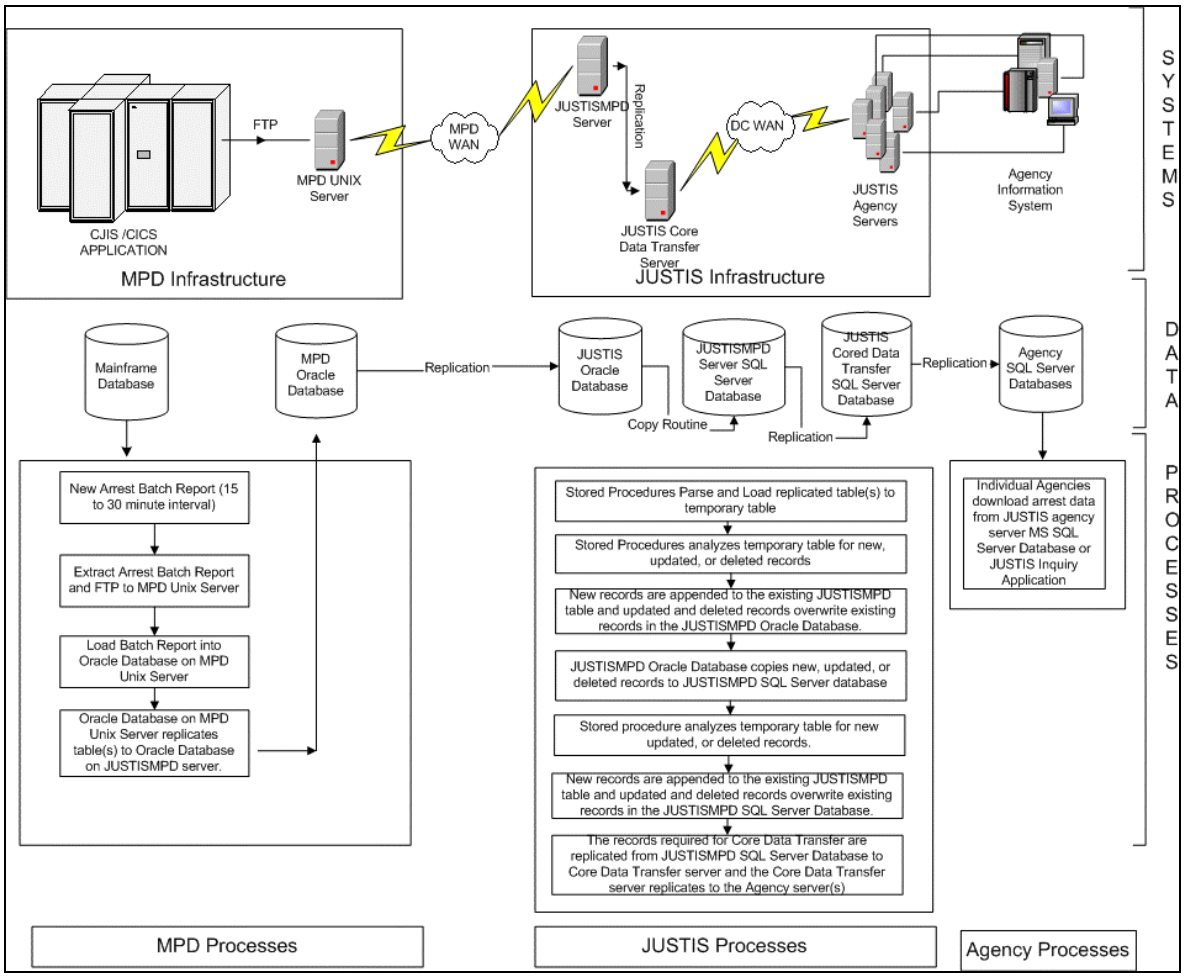

Figure 2 - Core Data Transfer Solution Design and Methodology

4.1.1 Process Flow:

1. At MPD – Hourly, the new, updated, and deleted arrest records (also known as "touched" records) extraction program is run. This program extracts all the "touched" arrest records from CJIS and places them into a flat file.
2. At MPD – Once the flat file is extracted, it is sent via FTP to the MPD Unix server.
3. At MPD – The flat file of "touched" arrest records are loaded into two tables in the MPD Oracle Database.

4. At MPD – The MPD Oracle database replicates the two arrest tables to staging area tables on the Oracle database on the JUSTISMPD server.
5. At JUSTIS – Stored procedures copy the two tables from the staging area tables to temporary tables also on the JUSTISMPD server. Here, they are parsed by stored procedures to isolate new, updated and deleted records.
6. At JUSTIS – A stored procedure copies new, updated, and deleted records from the two tables in the JUSTISMPD Oracle database to two tables in the active JUSTISMPD SQL server database. Updated records overwrite existing records in the SQL Server database on the JUSTISMPD server.
7. At JUSTIS – A date of last update is written to the SQL Server active tables
8. At JUSTIS – Stored procedures on the JUSTISMPD SQL Server database replicates the active tables to two temporary tables on the JUSTIS Core Data Transfer server. The tables are searched for the last fifteen days of new, updated and deleted records.
9. At JUSTIS – A District of Columbia Public Safety Tracking Number is generated for each arrest record on the JUSTIS Core Data Transfer server.
10. At JUSTIS – A stored Procedure parses and loads the replicated tables to two temporary tables in the SQL Server database located on the JUSTIS Core Data Transfer server. The temporary tables are analyzed for the last fifteen days' new, updated, and deleted records.
11. At JUSTIS – A stored Procedure appends new records to the JUSTIS Core Data Transfer SQL Server database active tables and updated and deleted records overwrite existing records in the SQL Server database active tables.
12. At JUSTIS – Core Data Transfer SQL Server database active tables are made available to JUSTIS Inquiry Application and agencies that wish to access the data from the Core Data Transfer server.
13. At JUSTIS – The Core Data Transfer SQL Server database active tables are replicated to the JUSTIS Agency server SQL Server databases located on select agency's JUSTIS servers. This data is made available to JUSTIS agencies that wish to access data from the agency server located on the agency's local area network (LAN).

4.2 Core Data Elements

The table below lists the data elements to be included in the Core Data Transfer solution as agreed upon by the JAD session participants.

JUSTIS Core Data Elements		
Category	**Data Element**	**Field Name**
	District of Columbia Public Safety Tracking Number	
Arrest	PDID	PDID_Number
	Police District	Arrest_Number (first two characters)
	Police Service Area*	
	Arrest Number	Arrest_ Number
	Arrest Date	Arrest_Date
	Arrest Time	Arrest_Time
	Arrest Location	Arrest_Address
	Arresting Officer Name	AO_Last_Name
	Arresting Officer Badge Number	AO_Badge_Number
	Lockup Number*	
	Booking Date	Booking_Date
	Booking Time	Booking_Time
	Booking Location*	
Arrest Charges	MPD Charge Code	Offense_Code
	Charge Description	Charge_Unlisted
	Charge Disposition	Charge_Disposition_Code
	CCN	CCN
	Warrant Type* above	
	Warrant Number	Warrant_Number
Lockup	Disposition Code	Disposition_Code
	Lockup Date	CCB_Date_In
	Release Type*	

* Data Element is not currently incorporated into the MPD CJIS data extraction. Incorporation of this element would require extraneous programming effort by MPD resources. A value judgment regarding the incorporation of these elements with regard to the MPD level of effort is required by the ITAC.

JUSTIS Core Data Elements		
Category	**Data Element**	**Field Name**
	Lockup Type*	
	Docket Number	Docket_Number
Defendant	Arrest First Name	Off_First_Name
	Arrest Middle Name	Off_Middle_Name
	Arrest Last Name	Off_Last_Name
	Arrest Name Suffix	Off_Suffix
	Arrest Nick Name	Off_Nick_Name
	True Name*	
	Defendant Date of Birth	Off_DOB
	Defendant Race	Off_Race
	Defendant Sex	Off_Sex
	Defendant Street	Off_Address
	Defendant City	Off_City
	Defendant State	Off_State
	Defendant Police Service Area*	
Victim Information	Victim Sex	Vict_Sex
	Victim Age	Vict_Age
	Victim Race	Vict_Race

Table 2 - JUSTIS Core Data Elements

4.2.1 District of Columbia Public Safety Tracking Number

Criminal Justice agencies in the District of Columbia stand to benefit from a tracking number that will give agencies the ability to identify individual arrest records. Such a tracking number derived the Metropolitan Police Department Arrest Number will allow agencies to follow an arrest as it progresses through the public safety community. In addition with the proper application of the tracking number, JUSTIS participating agencies will be able to reduce data inconsistencies, errors, and redundancies through the implementation of the JUSTIS Data Quality Alliance. Upon receipt of the agreed upon JUSTIS Core Data Elements, the JUSTIS Core Data Infrastructure will generate the DC Public Safety Tracking Number and make it available to participating agencies.

4.3 User Agency Interface

User agencies will have two options for accessing core data. Agencies will either be able to access the core data directly from the Core Data Transfer SQL Server database (Database Interface) or the agencies will be able to download the core data in the form of an Arrest Information Report, e.g., lock-up list that is accessible through the JUSTIS Inquiry Application (JUSTIS Inquiry Application Interface).

4.3.1 Database Interface

The database interface will provide user agencies with two options. The agency's information system administrator will have the option of accessing the data from either the centrally located JUSTIS Core Data Transfer server or from their own decentralized JUSTIS agency server. In both cases, the agency will be given read-access to a table within the server's database. The agency will have the option of downloading the data from the database or directly connecting to the database to receive updates in a publish/subscribe manner.

4.3.2 JUSTIS Inquiry Application Interface

The JUSTIS users, who are not readily able to access the core data through the database interface option, will have the ability to access the core data through the JUSTIS Inquiry Application. The JUSTIS users will be able to obtain the list of arrests for the last fifteen days as of the last processed batch of arrest data from MPD at the time of the user's inquiry (a snapshot). This data will be provided in a pre-formatted HTML report for display and be made available in three formats (XML, MS Word, .txt) for download to the user's PC. Also, the users will have the option of viewing and/or downloading any one of the last fifteen days arrest data.

The following picture illustrates the option of accessing the Arrest Report through the JUSTIS Inquiry Application:

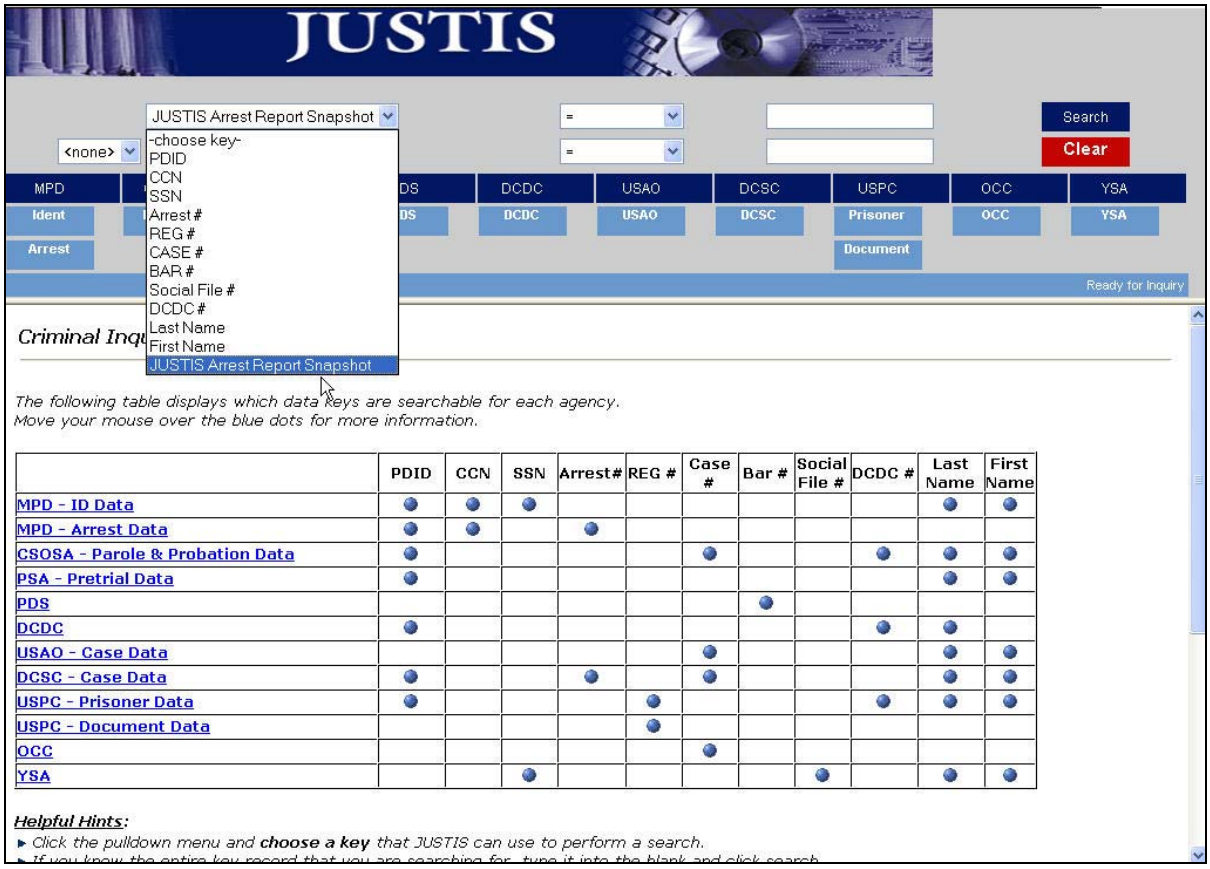

Figure 3 - Accessing the JUSTIS Arrest Report Snapshot

4.4 Core Data Transfer Solution Summary

The designed JUSTIS Core Data Transfer solution will provide the JUSTIS user community a set of core data (4.2 Core Data Elements) that originates from the Metropolitan Police Department Criminal Justice Information System (CJIS). This core data will be made available to JUSTIS in a batch processing extraction methodology every sixty minutes. Upon its entrance into the JUSTIS infrastructure, the core data will be made available to the JUSTIS user community via a “push” to the agencies’ JUSTIS server, or through a “pull” where the agency will directly access the JUSTIS Core Data Transfer server.

One enhancement to the “pull” methodology is the ability given agencies to access the core data through the JUSTIS Inquiry Application. This allows the agency to download via a 128-bit encrypted web browser, a “snapshot” of the arrest report(s) for the previous fifteen days.

The solution as designed enables justice agencies timely access to a set of core data which is derived from the MPD arrest information. It is also providing this data in a variety of formats that give each agency the opportunity to develop its own operational information system input strategy not constrained by any major contemporary information system enterprise architecture.

The implementation of this solution will continue to make JUSTIS a long-term business critical solution to the public safety community of the District of Columbia.

5. Appendix

5.1 JAD Session Attendees

Core Data Transfer JAD Session Attendees			
Name	**Agency**	**Phone Number**	**Email Address**
Earl Gillespie	CJCC Council (ITLO)	(202) 727-7862	egillespie@dc.gov
Janice Bergin	PSA (Chairman)	(202) 220-5651	janice.bergin@csosa.gov
Dave Kennamer	CJCC Council (SO)	(202) 727-1932	david.kennamer@dc.gov
Gerry Palombi	KPMG Consulting, Inc.	(703) 747-6148	gpalombi@kpmg.com
Tony Curington Jr.	KPMG Consulting, Inc.	(202) 533-4664	tcuringtonjr@kpmg.com
Vidyababu Kuppusamy	KPMG Consulting, Inc.	(202) 533-4716	vkuppusamy@kpmg.com
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Ryan Preston	KPMG Consulting, Inc.	(202) 533-3432	rpreston@kpmg.com
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Dennis K. Caravantes	PSA	(202) 585-7932	dennis.caravantes@csosa.gov
Ron Hickey	PSA	(202) 727-7928	ron.hickey@csosa.gov
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Nate Balis	DHS-YSA	(202) 724- 5071	
Janice Y. Sheppard	OCC	(202) 727-6254	janice.sheppard@dc.gov
Diana Lowery	PSA	(202) 585-7937	diana.lowery@csosa.gov
Demond Tigs	PSA	(202) 585-7030	demond.tigs@csosa.gov

Core Data Transfer JAD Session Attendees			
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Dave Edwards	MPD	(202) 727-4530	dwe@attglobal.net
Kathleen French	CSOSA	(202) 585-7903	kathleen.french@csosa.gov
Karen Wallace	CSOSA	(202) 220-5392	karen.wallace@csosa.gov
Ann Schmidt	OCT (Office of the Corrections Trustee)	(202) 616-2918	annesley.schmidt@csosa.gov
Vic Stone	OCT (Office of the Corrections Trustee)	(202) 516-1000	victor.stone@csosa.gov
Dave Rosenthal	OCC	(202) 727- 6277	dave.rosenthal@dc.gov
Lorenzo Vallone	PDS	(202) 626-8407	lvallone@pdsdc.gov
Scott Hopkins	PSA	(202) 220-5465	scott.hopkins@csosa.gov